Public Summary for COPPER (SLU-01)
Saint Louis University

(1) The name, mailing address and telephone number of the licensee and any affiliates or subsidiaries;

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(2) A general description of the system, its orbit(s) and the type of data to be acquired; and

a) Licensed system:

COPPER (SLU-01)

b) System type:

1U CubeSat-class satellite

c) Overview/Mission:

COPPER is the first spacecraft built and operated by Saint Louis University (SLU). It was designed and built by students and faculty in SLU's Parks College of Engineering, Aviation, and Technology. COPPER's primary mission is to characterize the use of a compact infrared imager for on-orbit proximity operations; the imager will be used on-orbit to detect spacecraft deployments and thruster usage in the minutes immediately after COPPER is ejected from the launch vehicle. COPPER's secondary mission is to study the effects of space radiation on modern memory devices, in partnership with Vanderbilt University.

d) Operations:

- **Proposed launch schedule**: COPPER is manifested on the ORS-3 launch out of Wallops Flight Facility. Nominal launch date is 31 October 2013.
- **Proposed launch source**: COPPER's launch is sponsored by NASA through the Educational Launch of Nanosatellites (ELaNa) program. COPPER is manifested as part of ELaNa-IV.
- **Anticipated operational date**: 1 November 2013.
- **Baseline Orbit**: 500 km altitude, circular. Inclination 40.5°. Orbit period 94.6 minutes.

e) Mission Data:

- **Data to be acquired**: COPPER will be capturing approximately 2000 images during the first 8 minutes after ejection. COPPER will be tumbling during that period, so those images will contain objects visible from nearly every direction: Earth, limb, space, the launch vehicle and other spacecraft ejected along with COPPER.
- **Anticipated best theoretical resolution**: best-possible resolution of objects on the Earth's surface is 660 meters.
- **Anticipated system lifetime**: COPPER is designed to operate in orbit for 6 months. The orbit lifetime is approximately 5 years.

(3) The name and address upon whom service of all documents may be made

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